

IN THE ABSTRACT:

– An apparatus for pyrolysis and gasification of organic substances and mixtures thereof is provided with a pyrolysis reactor (1), a fluidized-bed firing (3) for pyrolysis residue, a reaction zone (2) for the pyrolysis gases (13) and circulating fluidized-bed material (35). The pyrolysis reactor (1) has a sluice for introducing application material (10) thereinto. An inlet for the fluidized-bed material (35) is disposed next to the combustion fluidized bed (3). Transport apparatus (14) for mixture of solid pyrolysis residue and circulating fluidized bed material (35) is disposed at or near a bottom of the fluidized bed (3) and lower end of the pyrolysis reactor (1). An overflow is situated at or near the top of the fluidized bed (3) while a heat transfer member is positioned within the reaction zone (2). –